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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,482	06/28/2004	Sylvain Denniel	P/3255-78	4505

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OSTROLENK FABER GERB & SOFFEN  
1180 AVENUE OF THE AMERICAS  
NEW YORK, NY 100368403

EXAMINER

COY, NICOLE A

ART UNIT PAPER NUMBER

3672

DATE MAILED: 10/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.



<b>Office Action Summary</b>	<b>Application No.</b> 10/500,482	<b>Applicant(s)</b> DENNIEL ET AL.	
	<b>Examiner</b> Nicole Coy	<b>Art Unit</b> 3672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 14 August 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-16 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |



## DETAILED ACTION

### *Claim Objections*

1. Claims 15 and 16 are objected to because of the following informalities: the phrase "the cable" is repeated within line 1 of each claim. Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4, 6, 7, and 10-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Head (USP 6,323,420).

With respect to claim 1, Head discloses a rigid pipe (20) for transporting hydrocarbons the pipe being a reelable type (wherein 20 is coiled tubing) and further comprising at least one electrical heating cable (31) extending through the pipe (see figure 5), wherein the cable (31) is capable of undergoing an elongation of at least 0.5% without damage (see column 5 lines 31-40 and column 3 lines 21-31, wherein the cables are made from a similar material as applicant's and thus would inherently be capable of undergoing an elongation of at least 0.5% without damage).



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With respect to claim 2, Head discloses a similar cable to that of applicant, thus the cable is inherently subject to elastic deformation while remaining below 15% of an elastic limit of the material.

With respect to claim 3, Head discloses that the cable (31) is disposed parallel to a longitudinal axis of the pipe (see figure 5).

With respect to claim 4, Head discloses that the pipe (20) is comprised of two coaxial pipes, including an inner (40) and an outer pipe (20), respectively, the pipes being separated by an annular space (see figure 5), and the cable (31) is disposed along one surface of the inner pipe.

With respect to claim 6, Head discloses that the cable is a central conducting braided cable (see figure 12).

With respect to claim 7, Head discloses that the braided cable is surrounded by at least one electrical insulation sheath (70, 71, 72).

With respect to claim 10, Head discloses that the cable extends parallel to the pipe, not being longer than the pipe through which the cable passes (see figure 12).

With respect to claim 11, Head discloses that the pipe (20) has a wall (see figure 5) and the cable (31) is inside a space enclosed by the wall (see figure 5).

With respect to claim 12, Head discloses that the pipe (20) comprises a double-walled envelope, of two coaxial pipes (20, 40), respectively an inner pipe (40) and an outer pipe (20), separated by an annular space (see figure 5).

With respect to claim 13, Head discloses that the cable (31) passes between the coaxial pipes (see figure 5).



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With respect to claim 14, Head discloses a similar cable to the cable claimed, thus the cable is inherently subject to elastically deformation while remaining below 5% an elastic limit of the material.

With respect to claim 16, Head discloses that the cable is capable of bearing compression without separating from the pipe (wherein the cable in Head would inherently bear compressing without separating from the pipe, as it is made from the same material as applicant's cable).

4. Claims 1-5, and 10-12, 14-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Neuroth et al (USP 6,585,046).

With respect to claim 1, Neuroth et al. discloses a rigid pipe (27) for transporting hydrocarbons the pipe being a reelable type (coiled tubing) and further comprising at least one electrical heating cable (34) extending through the pipe (see figure 1), wherein the cable is capable of undergoing an elongation of at least 0.5% without damage (see column 4 lines 18-39, wherein the cable is inherently capable of undergoing an elongation of at least 0.5% as it is substantially identical to the cable as claimed by applicant).

With respect to claim 2, Neuroth et al. discloses a similar cable to that of applicant, thus that the cable is subject to elastic deformation while remaining below 15% of an elastic limit of the material.

With respect to claim 3, Neuroth et al. discloses that the cable is disposed parallel to a longitudinal axis of the pipe (see figure 1).



With respect to claim 4, Neuroth et al. discloses that the pipe is comprised of two coaxial pipes, including an inner (27) and an outer pipe (21), respectively, the pipes (27, 21) being separated by an annular space (see figure 1), and the cable (34) is disposed along one surface of the inner pipe (27).

With respect to claim 5, Neuroth et al. discloses that the cable is a flat cable (see figure 12).

With respect to claim 10, Neuroth et al. discloses that the cable (34) extends parallel to the pipe (27), not being longer than the pipe through which the cable passes (see figure 1).

With respect to claim 11, Neuroth et al. discloses that the pipe (27) has a wall and the cable is inside a spaced enclosed by the wall.

With respect to claim 12, Neuroth et al. discloses that the pipe (27) comprises a double-walled envelope, of two coaxial pipes, respectively an inner (27) and an outer pipe (21), separated by an annular space.

With respect to claim 14, Neuroth et al. discloses a similar cable to the cable claimed, thus the cable is inherently subject to elastically deformation while remaining below 5% an elastic limit of the material.

With respect to claim 15, Neuroth et al. discloses that the cable is rectilinearly disposed along the pipe (see figure 1).

With respect to claim 16, Neuroth et al. discloses that the cable is capable of bearing compression without separating from the pipe (wherein the cable in Neuroth would



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inherently bear compressing without separating from the pipe, as it is substantially similar to applicant's cable).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Head (USP 6,323,420) over Lenze (USP 5,394,823).

With respect to claim 5, Head does not disclose that the cable is flat. However, flat cables are well known type of cable. See for example, Lenze, who discloses that a flat cable can be used due to space requirements. See column 2 lines 65-67. Thus, it would have been obvious to one having ordinary skill in the art to modify Head by including a flat cable as taught by Lenze in order use up less space.

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Head in view of Quigley et al. (US 2001/0025664).

With respect to claim 8, Head discloses that the pipe (40) is a pipe-in-pipe having coaxial pipes (20, 40) with an annular space between the pipes (see figure 5). Head does not disclose sealing members in the annular space between the coaxial pipes, the sealing members being configured for receiving the heating cable in sections of the



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cable. Quigley et al. discloses sealing members 66 in order to add structural strength and support to the cable. See paragraph [0120]. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Head by including sealing members as taught by Quigley et al. in order to add structural strength and support to the cables.

***Allowable Subject Matter***

8. Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

9. Applicant's arguments filed 8/14/06 have been fully considered but they are not persuasive. Applicant first argues that the cited portion of Head does not describe the structure or material of the cables, but rather describes their arrangement or orientation and its effect. Applicant is further directed towards column 3 lines 21-31 for a showing the material the cable is made from.

In addition, the applicant also argues that there is no explicit teaching in Head that the cable is capable of undergoing any measure of elongation. However, the cable of Head just needs to be capable of elongating 0.5 %, as this limitation is not positively recited in the claims. It would be understood by one skilled in the art that the cable in



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Head was capable of elongating 0.5%, especially considering that on a 1000 foot cable, that is only an elongation of 5 feet.

With respect to claim 3, the applicant argues that cable 30 is wound helically around the carrier tube and is therefore not parallel with a longitudinal axis. However, the total length of the helically wound cable is parallel with a longitudinal axis in an axial direction, as shown in Figure 5.

With respect to claim 8, the applicant argues that the cables are not sealing members and do not, nor are they alleged in the reference to perform any sealing function. As noted above, the applicant has rejected claim 8 over Head in view of Quigley et al. for the teaching of a sealing function.

With respect to claim 9, the applicant argues that Head does not disclose a connection box for automatically locally re-establishing connection between the phases of the circuit in the event of a failure of the circuit. As noted above, this claim has been objected to as being allowable and depending from a rejected claim.

With regards to claim 10, the applicant argues that the helical winding in Head clearly shows that the cable is not parallel to the pipe, because it is helically wound. Applicant further argues that it is not longer than the pipe, it is in fact longer, because of the additional length required to form the helix. However, the helical length of cable 30 is the overall same length as the pipe, as it is not extending past the pipe.

With respect to claim 5, the applicant argues that that there is no prima facie case presented to use a flat cable. The examiner has included a reference in the rejection of claim 5, to show that indeed flat cables are well known in the art.



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In view of the new rejections, this rejection is made non-final.

**Conclusion**

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicole Coy whose telephone number is 571-272-5405. The examiner can normally be reached on M-F 7:30-5:00, 1st F off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

nac

  
William A. Miller  
Primary Examiner